

Title (en)
BVDV virus-like particles

Title (de)
BVDV virusähnliche Partikeln

Title (fr)
Particules de type viral du BVDV

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Application
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Abstract (en)
The present invention relates to bovine viral diarrhea virus (BVDV) virus-like particles, a polycistronic RNA and DNA corresponding thereto encoding a polyprotein of BVDV structural proteins that are sufficient to form BVDV virus-like particles, a viral vector encoding factors and structural proteins for the assembly of BVDV virus-like particles, a vaccine comprising BVDV virus-like particles, a diagnostic kit and methods for preparing BVDV virus-like particles.

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Citation (applicant)
• WO 9512682 A2 19950511 - UPJOHN CO [US], et al
• WO 9221751 A1 19921210 - STICHTING CENTR DIERGENEESKUND [NL]
• HORZINEK: "Pestiviruses - taxonomic perspectives", ARCH. VIROLOGY, 1991, pages 55 - 65
• COLLET ET AL.: "Proteins encoded by bovine viral diarrhea virus: the genomic organisation of a pestivirus", VIROLOGY, vol. 165, 1988, pages 200 - 208
• BAUMERT ET AL.: "Hepatitis C virus structural proteins assemble into virus-like particles in insect cells", J. VIROL., vol. 72, 1998, pages 3827 - 3836
• KAASHOEK ET AL.: "A conventionally attenuated glycoprotein E-negative strain of bovine herpesvirus type 1 is an efficacious and safe vaccine", VACCINE, vol. 12, 1994, pages 439 - 444
• VAN OIRSCHOT ET AL.: "Vaccination of cattle against bovine viral diarrhoea", VET. MICROBIOL., vol. 64, 1999, pages 169 - 183
• REDDY ET AL., COMP IMMUNOL MICROBIOL INFECT DIS., vol. 22, 1999, pages 231 - 246
• HARPIN ET AL.: "Vaccination of cattle with a DNA plasmid encoding the bovine viral diarrhoea virus major glycoprotein E2", J. GEN. VIROL., vol. 80, 1999, pages 3137 - 3144
• ROTH; KAEBERLE: "Suppression of neutrophil and lymphocyte function induced by a vaccinal strain of bovine viral diarrhea virus with or without administration of ACTH", AM. J. VET. RES., vol. 44, 1983, pages 2366 - 2372
• LIESS ET AL.: "Studies on transplacental transmissibility of a bovine virus diarrhea (BVD) vaccine virus in cattle, Zentrbl. Veterinarmed", REIHE B, vol. 31, 1984, pages 669 - 681
• BRUSCHKE ET AL.: "A subunit vaccine based on glycoprotein E2 of bovine virus diarrhea virus induces fetal protection in sheep against homologous challenge", VACCINE, vol. 15, 1997, pages 1940 - 1945
• KWEON ET AL.: "Bovine herpesvirus expressing envelope protein (E2) of bovine viral diarrhea virus as a vaccine candidate", J. VET. MED. SCI., vol. 61, 1999, pages 395 - 401
• VAN RIJN ET AL.: "Subdivision of the pestivirus genus a based on envelope glycoprotein E2", VIROLOGY, vol. 237, 1997, pages 337 - 348
• BOLIN; RIDPATH: "Glycoprotein E2 of bovine viral diarrhea virus expressed in insect cells provides calves limited protection from systemic infection and disease", ARCH. VIROL., vol. 141, 1996, pages 1463 - 1477
• ELAHI ET AL.: "Induction of humoral and cellular immune responses against the nucleocapsid of bovine viral diarrhea virus by an adenovirus vector with an inducible promoter", VIROLOGY, vol. 261, 1999, pages 1 - 7
• REDDY ET AL.: "Antigenic differences between a field isolate and vaccine strains of bovine viral diarrhea virus", J. CLIN. MICROBIOL., vol. 33, 1995, pages 2159 - 2161
• SHIU ET AL.: "The presence of RNA splicing signals in the cDNA construct of the E2 gene of classical swine fever virus affected its expression", J. VIROL. METHODS, vol. 69, 1997, pages 223 - 230
• STADEN: "Computer methods to locate signals in nucleic acid sequences", NUCL. ACIDS. RES., vol. 12, 1984, pages 505 - 519
• KELLER: "No end yet to messenger RNA 3' processing", CELL, vol. 81, 1995, pages 829 - 832
• VANDENBERGH: "An apparent pause site in the transcription unit of the rabbit alpha-globin gene", J. A MOL. BIOL., vol. 220, 1991, pages 255 - 270
• RIJSEWIJK ET AL.: "Spontaneous BHV-1 recombinants in which the gl/gE/US9 region is replaced by a duplication/inversion of the US1.5/US2 region", ARCH. VIROL., vol. 144, 1999, pages 1527 - 1537
• RIJSEWIJK, ARCH. VIROL., vol. 144, 1999, pages 1527 - 1537

Citation (search report)
• [AD] WO 9512682 A2 19950511 - UPJOHN CO [US], et al
• [A] US 6001613 A 19991214 - DONIS RUBEN O [US], et al
• [A] ELAHI SEYYED MEHDY ET AL: "Induction of humoral and cellular immune responses against the nucleocapsid of bovine viral diarrhea virus by an adenovirus vector with an inducible promoter.", VIROLOGY, vol. 261, no. 1, 15 August 1999 (1999-08-15), pages 1 - 7, XP002155982, ISSN: 0042-6822
• [A] SCHMITT JUTTA ET AL: "Expression of bovine viral diarrhoea virus glycoprotein E2 by bovine herpesvirus-1 from a synthetic ORF and incorporation of E2 into recombinant virions.", JOURNAL OF GENERAL VIROLOGY, vol. 80, no. 11, November 1999 (1999-11-01), pages 2839 - 2848, XP002155983, ISSN: 0022-1317

Cited by
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